

What is claimed is:

1. A method for selectively isolating or visualizing a target cell differentiated from an embryonic stem cell, which comprises transferring a first recombinant DNA in which a first promoter, a gene having recombinase recognition sequences on both ends, and a selective marker gene of a target cell differentiated from an embryonic stem cell are arranged in this order from a 5' side, and the first promoter makes the selective marker gene express, and a second recombinant DNA in which a second promoter specifically expressing in a target cell differentiated from an embryonic stem cell, and a recombinase-expressing gene are arranged in this order from a 5' side, respectively, into an embryonic stem cell.

2. The method for selectively isolating or visualizing a target cell differentiated from an embryonic stem cell according to claim 1, wherein the recombinase recognition sequence is loxP.

3. The method for selectively isolating or visualizing a target cell differentiated from an embryonic stem cell according to claim 1, where the first promoter is a constitutive strong expression promoter.

4. The method for selectively isolating or visualizing a target cell differentiated from an embryonic stem cell according to claim 3, wherein the constitutive strong expression promoter is a CMV promoter or a CA promoter.

5. The method for selectively isolating or visualizing a target cell differentiated from an embryonic stem cell according to claim 1, wherein the selective marker gene is a fluorescent protein gene.

6. The method for selectively isolating or visualizing a target cell differentiated from an embryonic stem cell according to claim 1, wherein the recombinase-expressing gene is a recombinase Cre-expressing gene.

7. The method for selectively isolating or visualizing a target cell differentiated from an embryonic stem cell according to claim 1, wherein the second promoter is a Nkx2.5 gene promoter or an α MHC gene promoter.

8. The method for selectively isolating or visualizing a target cell differentiated from an embryonic stem cell according to claim 1, wherein transfer of the first recombinant DNA into an embryonic stem cell is performed using a first vector for transferring a gene.

9. The method for selectively isolating or visualizing a target cell differentiated from an embryonic stem cell according to claim 8, wherein the first vector for transferring a gene is a virus vector.

10. The method for selectively isolating or visualizing a target cell differentiated from an embryonic stem cell according to claim 9, wherein the virus vector is an adenovirus vector.

11. The method for selectively isolating or visualizing

a target cell differentiated from an embryonic stem cell according to claim 1, wherein transfer of the second recombinant DNA into an embryonic stem cell is performed using a second vector for transferring a gene.

12. The method for selectively isolating or visualizing a target cell differentiated from an embryonic stem cell according to claim 11, wherein the second vector for intruding a gene is a virus vector.

13. The method for selectively isolating or visualizing a target cell differentiated from an embryonic stem cell according to claim 12, wherein the virus vector is an adenovirus vector.

14. An embryonic stem cell in which the first recombinant DNA as defined in claim 1 is transferred.

15. The embryonic stem cell in which the second recombinant DNA as defined in claim 1 is transferred.

16. The embryonic stem cell in which the first recombinant DNA and the second recombinant DNA as defined in claim 1 are transferred, respectively.

17. The embryonic stem cell according to any one of claim 14 to claim 16, wherein the embryonic stem cell is derived from a mouse.

18. A first vector for transferring a gene, which comprises the first recombinant DNA as defined in claim 8.

19. The first vector for transferring a gene according to claim 18, which is a virus vector.

20. The first vector for transferring a gene according to claim 19, wherein the virus vector is an adenovirus vector.

21. A second vector for transferring a gene, which comprises the second recombinant DNA as defined in claim 11.

22. The second vector for transferring a vector according to claim 21, which is a virus vector.

23. The second vector for transferring a gene according to claim 22, wherein the virus vector is an adenovirus vector.

24. A kit for isolation or visualization used in a method for selectively isolating or visualizing a target cell differentiated from an embryonic stem cell, which comprises the first vector for transferring a gene as defined in claim 18, and the second vector for transferring a gene as defined in claim 21.

25. The kit for isolation or visualization used in a method for selectively isolating or visualizing a target cell differentiated from an embryonic stem cell according to claim 24, wherein the first vector for transferring a gene and the second vector for transferring a gene are a virus vector.

26. The kit for isolation or visualization used in a method for selectively isolating or visualizing a target cell differentiated from an embryonic stem cell according to claim 25, wherein the virus vector is an adenovirus vector.

27. The kit for isolation of visualization used in a method for selectively isolating or visualizing a target cell

differentiated from an embryonic stem cell, which comprises the embryonic stem cell as defined in claim 14, and the second vector for transferring a gene as defined in claim 21.

28. The kit for isolation or visualization used in a method for selectively isolating or visualizing a target cell differentiated from an embryonic stem cell according to claim 27, wherein the second vector for transferring a gene is a virus vector.

29. The kit for isolation or visualization used in a method for selectively isolating or visualizing a target cell differentiated from an embryonic stem cell according to claim 28, wherein the virus vector is an adenovirus vector.

30. The kit for isolation or visualization used in a method for selectively isolating or visualizing a target cell differentiated from an embryonic stem cell, which comprises the first vector for transferring a gene as defined in claim 18, and the embryonic stem cell as defined in claim 15.

31. The kit for isolation or visualization used in a method for selectively isolating or visualizing a target cell differentiated from an embryonic stem cell according to claim 30, wherein the first vector for transferring a gene is a virus vector.

32. The kit for isolation or visualization used in a method for selectively isolating or visualizing a target cell differentiated from an embryonic stem cell according to claim

31, wherein the virus vector is an adenovirus vector.

33. A cell obtained by the method for selectively isolating or visualizing a target cell differentiated from an embryonic stem cell as defined in claim 1.

34. The cell according to claim 33, wherein the cell is a cell obtained by using a Nkx2.5 gene promoter as the second promoter.

35. The cell according to claim 33, wherein the cell is a cardiac muscle cell obtained by using an α MHC gene promoter as the second promoter.

36. A tissue, which comprises the cell as defined in claim 33.

37. A method for treating a disease, which comprises using the cell as defined in claim 33 and/or the tissue as defined in claim 36.

38. The method for treating a disease according to claim 37, wherein the disease is a cardiac disease.